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NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 MAR 15 WPIDS/WPIX enhanced with new FRAGHITSTR display format
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NEWS 6 MAR 30 RDISCLOSURE reloaded with enhancements
NEWS 7 APR 02 JICST-EPLUS removed from database clusters and STN
NEWS 8 APR 30 GENBANK reloaded and enhanced with Genome Project ID field
NEWS 9 APR 30 CHEMCATS enhanced with 1.2 million new records
NEWS 10 APR 30 CA/Caplus enhanced with 1870-1889 U.S. patent records
NEWS 11 APR 30 INPADOC replaced by INPADOCDB on STN
NEWS 12 MAY 01 New CAS web site launched
NEWS 13 MAY 08 CA/Caplus Indian patent publication number format defined
NEWS 14 MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display
fields
NEWS 15 MAY 21 BIOSIS reloaded and enhanced with archival data
NEWS 16 MAY 21 TOXCENTER enhanced with BIOSIS reload
NEWS 17 MAY 21 CA/Caplus enhanced with additional kind codes for German
patents
NEWS 18 MAY 22 CA/Caplus enhanced with IPC reclassification in Japanese
patents
NEWS 19 JUN 18 CA/Caplus to be enhanced with pre-1967 CAS Registry Numbers

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
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FILE 'HOME' ENTERED AT 09:55:41 ON 26 JUN 2007

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=> S (Folate receptor) (S)autoantibodies AND pd<=20031107
2 FILES SEARCHED...
L1 0 (FOLATE RECEPTOR) (S) AUTOANTIBODIES AND PD<=20031107

=> S (Folate(W)receptor)(S)antibodies AND pd<=20031107
1 FILES SEARCHED...
L2 69 (FOLATE(W) RECEPTOR) (S) ANTIBODIES AND PD<=20031107

=> Dup Rem L2
PROCESSING COMPLETED FOR L2
L3 25 DUP REM L2 (44 DUPLICATES REMOVED)
 ANSWERS '1-17' FROM FILE MEDLINE
 ANSWERS '18-19' FROM FILE BIOSIS
 ANSWERS '20-25' FROM FILE CAPLUS

=> D ti L3 1-25

L3 ANSWER 1 OF 25 MEDLINE on STN DUPLICATE 1
TI Reversion of transformed phenotype in ovarian cancer cells by
intracellular expression of anti folate receptor
antibodies.

L3 ANSWER 2 OF 25 MEDLINE on STN DUPLICATE 2
TI Antibodies to folate receptors impair
embryogenesis and fetal development in the rat.

L3 ANSWER 3 OF 25 MEDLINE on STN DUPLICATE 3
TI Immunotherapy of folate receptor-expressing tumors: review of recent
advances and future prospects.

L3 ANSWER 4 OF 25 MEDLINE on STN DUPLICATE 4
TI Biodistribution of a 153 Gd-folate dendrimer, generation = 4, in mice with
folate-receptor positive and negative ovarian tumor xenografts.

L3 ANSWER 5 OF 25 MEDLINE on STN DUPLICATE 5
TI Folate targeting of haptens to cancer cell surfaces mediates immunotherapy
of syngeneic murine tumors.

L3 ANSWER 6 OF 25 MEDLINE on STN DUPLICATE 6
TI The alpha folate receptor is highly activated in malignant pleural
mesothelioma.

L3 ANSWER 7 OF 25 MEDLINE on STN DUPLICATE 7
TI Characterization of a folate receptor in parotid gland and a folate
binding protein in saliva from humans. Epitope relatedness to human milk
folate binding protein.

L3 ANSWER 8 OF 25 MEDLINE on STN DUPLICATE 8
TI Interaction of folate receptor with signaling molecules lyn and G(alpha)(i-3) in detergent-resistant complexes from the ovary carcinoma cell line IGROV1.

L3 ANSWER 9 OF 25 MEDLINE on STN DUPLICATE 9
TI Targeted drug delivery via the folate receptor.

L3 ANSWER 10 OF 25 MEDLINE on STN DUPLICATE 10
TI High-affinity folate receptor in human ovary, serous ovarian adenocarcinoma, and ascites: radioligand binding mechanism, molecular size, ionic properties, hydrophobic domain, and immunoreactivity.

L3 ANSWER 11 OF 25 MEDLINE on STN DUPLICATE 11
TI Folate receptors in malignant and benign tissues of human female genital tract.

L3 ANSWER 12 OF 25 MEDLINE on STN DUPLICATE 12
TI Single-chain Fv/folate conjugates mediate efficient lysis of folate-receptor-positive tumor cells.

L3 ANSWER 13 OF 25 MEDLINE on STN DUPLICATE 13
TI Characterization of the folate receptor in human molar placenta.

L3 ANSWER 14 OF 25 MEDLINE on STN DUPLICATE 14
TI Conjugates of folate and anti-T-cell-receptor antibodies specifically target folate-receptor-positive tumor cells for lysis.

L3 ANSWER 15 OF 25 MEDLINE on STN DUPLICATE 15
TI A high-affinity soluble folate receptor in fluids of non-neoplastic ovarian cysts: radioligand binding, molecular size, hydrophobic residue, and immunological properties.

L3 ANSWER 16 OF 25 MEDLINE on STN DUPLICATE 16
TI Folate receptor in malignant effusions of ovarian carcinoma.

L3 ANSWER 17 OF 25 MEDLINE on STN DUPLICATE 17
TI Megaloblastic hematopoiesis in vitro. Interaction of anti-folate receptor antibodies with hematopoietic progenitor cells leads to a proliferative response independent of megaloblastic changes.

L3 ANSWER 18 OF 25 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI GPI ANCHORED PROTEINS AND LIPID RAFTS IN CHEMORESPONSE.

L3 ANSWER 19 OF 25 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI The folate receptor as a potential therapeutic anticancer target.

L3 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
TI Methods and compositions for use in the treatment of filovirus mediated disease conditions

L3 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
TI DNA vaccination against the ovarian carcinoma-associated antigen folate receptor α (FR α) induces cytotoxic T lymphocyte and antibody responses in mice

L3 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
TI Bispecific agents target endogenous murine T cells against human tumor

xenografts

L3 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
TI Folate receptor-directed metalloprotease purification and use in gene therapy or immunotherapy

L3 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
TI Conjugates of folate anti-effector cell antibodies

L3 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
TI New anti-lung-cancer antibody cluster 12 reacts with human folate receptors present on adenocarcinoma

=> Log off H
SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 10:00:22 ON 26 JUN 2007

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LOGINID:SSPTAEGS1646

PASSWORD:
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SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE'
AT 10:04:49 ON 26 JUN 2007
FILE 'MEDLINE' ENTERED AT 10:04:49 ON 26 JUN 2007
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FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 09:56:03 ON 26 JUN 2007
L1 0 S (FOLATE RECEPTOR)(S)AUTOANTIBODIES AND PD<=20031107
L2 69 S (FOLATE(W)RECEPTOR)(S)ANTIBODIES AND PD<=20031107
L3 25 DUP REM L2 (44 DUPLICATES REMOVED)

=> D ibib abs L3 1, 2, 3, 5, 10,11,13,15-17, 19-20

| L3 | ANSWER 1 OF 25 MEDLINE on STN | DUPPLICATE 1 |
|-------------------|--|--------------|
| ACCESSION NUMBER: | 2003251987 MEDLINE | |
| DOCUMENT NUMBER: | PubMed ID: 12776159 | |
| TITLE: | Reversion of transformed phenotype in ovarian cancer cells by intracellular expression of anti folate receptor antibodies. | |
| AUTHOR: | Figini M; Ferri R; Mezzanzanica D; Bagnoli M; Luison E; Miotti S; Canevari S | |

CORPORATE SOURCE: Department of Experimental Oncology, Unit of Molecular Therapies, Istituto Nazionale Tumori, Via Venezian 1, 20133 Milan, Italy.
SOURCE: Gene therapy, (2003 Jun) Vol. 10, No. 12, pp. 1018-25.
Journal code: 9421525. ISSN: 0969-7128.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200307
ENTRY DATE: Entered STN: 31 May 2003
Last Updated on STN: 22 Jul 2003
Entered Medline: 21 Jul 2003

AB The alpha-folate receptor (FR) is selectively overexpressed in 90% of nonmucinous ovarian carcinomas, whereas no expression is detectable in normal ovarian surface epithelium (OSE). Indirect evidence suggests that FR expression is associated with tumor progression and affects cell proliferation. To evaluate better the role of FR, we developed an approach based on intracellular expression of single-chain (sc) antibodies (intrabody) to downmodulate membrane expression of FR in ovary cancer cells. IGROV-1 and SKOV3 ovarian carcinoma cell lines were transfected with an anti-FR intrabody. Transfectants and parental cells were tested for FR, integrins and anti-FR intrabody expression by fluorescence-activated cell sorting (FACS), reverse transcription and polymerase chain reaction (RT-PCR) and/or immunoblotting. Cell growth characteristics and adhesion properties were evaluated in liquid, semisolid and organotypic cultures. The anti-FR scFv inhibited FR expression from 60 to 99%. At physiological concentrations of folate, proliferation varied directly as a function of FR expression. FR downmodulation was accompanied by reduced colony-forming ability in soft agar, morphological change of the cells, significant enhanced adhesion to laminin or Matrigel, a two- to three-fold increase in alpha6beta4 integrin expression, and a marked reduction in laminin production. In three-dimensional organotypic cultures, anti-FR intrabody-transfected IGROV1 cells grew as a single-ordered layer, reminiscent of normal OSE growth in vivo. In conclusion, the anti-FR intrabody reverses the transformed phenotype in ovary cancer cells and may provide an efficient means to inhibit selectively the growth of these cells.

L3 ANSWER 2 OF 25 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2004043929 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14745937
TITLE: Antibodies to folate receptors
impair embryogenesis and fetal development in the rat.
AUTHOR: da Costa Maria; Sequeira Jeffrey M; Rothenberg Sheldon P;
Weedon Jeremy
COPORATE SOURCE: SUNY-Downstate Medical Center, Department of Medicine,
Brooklyn, New York 11203, USA.. maria.dacosta@downstate.edu
SOURCE: Birth defects research. Part A, Clinical and molecular
teratology, (2003 Oct) Vol. 67, No. 10, pp.
837-47.
Journal code: 101155107. ISSN: 1542-0752.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200406
ENTRY DATE: Entered STN: 28 Jan 2004
Last Updated on STN: 24 Jun 2004
Entered Medline: 21 Jun 2004

AB BACKGROUND: Folic acid (FA) supplementation reduces neural tube defects (NTDs) by 70%. However, the cause of most NTDs cannot be attributed to folate deficiency, to mutations of genes that encode folate pathway enzymes, and folate receptors (FRs) that mediate cellular folate uptake. Mouse embryos nullizygous for the ortholog of the FRalpha gene have lethal congenital abnormalities that are preventable by administration of folic acid to the dams. To determine whether antibodies to FRs are similarly teratogenic, we studied a rat model. METHODS: Immunohistochemistry with an antiserum to rat FRs was used to identify the receptors on reproductive tissues and embryos. Gestation day (GD) 8 rats received intraperitoneal injections of antiserum to the FRs, and their embryos were examined 2-9 days later. Some rats received pharmacologic doses of folic acid or dexamethasone before the antiserum was administered. RESULTS: The FRs are present on oocytes, the oviduct, and uterine epithelial cells, and in the embryo at all stages examined between GD4 and GD15. The antiserum has a dose-related effect on embryo viability and organogenesis. Folic acid prevented teratogenicity resulting from smaller doses of antiserum, but not that caused by larger doses. Resorption of embryos with the larger doses of the antiserum was prevented by dexamethasone. CONCLUSIONS: FRs are expressed on oocytes, epithelial cells of reproductive organs, and embryonic and extraembryonic tissues. Antiserum to FRs administered to pregnant rats causes embryonic damage. Embryo lethality with smaller doses of antiserum is preventable by administration of folic acid, while larger doses cause embryo damage by immune-mediated cell lysis, which can be prevented by dexamethasone.

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L3 ANSWER 3 OF 25 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2003395984 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12932634
TITLE: Immunotherapy of folate receptor-expressing tumors: review of recent advances and future prospects.
AUTHOR: Lu Yingjuan; Low Philip S
CORPORATE SOURCE: Endocyte, Inc., 1205 Kent Ave., West Lafayette, IN 47906, USA.
CONTRACT NUMBER: CA 89581 (NCI)
SOURCE: Journal of controlled release : official journal of the Controlled Release Society, (2003 Aug 28) Vol. 91, No. 1-2, pp. 17-29. Ref: 89
Journal code: 8607908. ISSN: 0168-3659.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200310
ENTRY DATE: Entered STN: 23 Aug 2003
Last Updated on STN: 16 Oct 2003
Entered Medline: 15 Oct 2003

AB The cell surface receptor for the vitamin folic acid (termed the folate receptor), is often elevated in cancers of the ovary, kidney, lung, mammary gland, brain, endometrium, and myeloid cells of hematopoietic origin. Because the folate receptor (FR) is either absent from normal tissues or localized to the apical surfaces of polarized epithelia, where it is inaccessible to circulating drugs, folate-linked drugs do not normally accumulate in healthy tissues. However, since the same receptor is fully accessible on cancer cells, it has frequently been exploited as a target for receptor-directed cancer therapies, including chemotherapies and immunotherapies. In fact, most strategies for the immunotherapy of cancer have at some time been adapted to treat FR-expressing tumors. In this article, recent progress in the retargeting of the immune system to

folate receptor-expressing cancers is summarized and future strategies for redirecting natural killer cells, antibodies and cytotoxic T lymphocytes to this large class of malignancies are proposed.

L3 ANSWER 5 OF 25 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2002207069 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11941454
TITLE: Folate targeting of haptens to cancer cell surfaces mediates immunotherapy of syngeneic murine tumors.
AUTHOR: Lu Yingjuan; Low Philip S
CORPORATE SOURCE: Department of Chemistry, 1393 Brown Building, Purdue University, West Lafayette, IN 47907, USA.
SOURCE: Cancer immunology, immunotherapy : CI, (2002 May) Vol. 51, No. 3, pp. 153-62. Electronic Publication: 2002-03-19.
Journal code: 8605732. ISSN: 0340-7004.
PUB. COUNTRY: Germany; Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200206
ENTRY DATE: Entered STN: 10 Apr 2002
Last Updated on STN: 5 Jan 2003
Entered Medline: 3 Jun 2002
AB A variety of human cancers overexpress a cell surface receptor with high affinity for the vitamin, folic acid (K(d) approximately 10(-10)M). Covalent attachment of therapeutic agents to folic acid has been shown to allow efficient targeting of the folate-drug conjugates to folate receptor-expressing cancer cells, with little or no uptake by normal tissues except the kidneys. We report here the use of folate's ability to deliver attached molecules specifically to cancer cells to convert poorly immunogenic tumors into highly immunogenic tissue targets. By linking folic acid to a model hapten, we have been able to decorate folate receptor-expressing cancer cell surfaces with >10(6) haptens/cell in vivo. Following marking of such cells with haptens, the cells are observed to become opsonized with autologous anti-hapten antibodies, which is presumed to mediate cell removal via antibody-dependent cellular cytotoxicity (ADCC). Supplemental administration of low levels of ADCC-activating cytokines [e.g. interleukin-2 (IL-2) and interferon-alpha (IFN-alpha)] has been shown to synergize with the folate-targeted immunotherapy. Thus, using M109 syngeneic lung cancer cells injected intraperitoneally into Balb/c mice that were previously immunized against fluorescein, a significant extension of life span is observed following treatment with folate-fluorescein conjugates, and complete cures are observed upon supplementation with moderate levels of IL-2 and IFN-alpha. Because control tumor-bearing mice treated with the same cytokines but with non-targeted fluorescein show no extension of life span, we conclude that tumor-specific opsonization is an essential step in this immunotherapy. Finally, because the anti-fluorescein antibodies are unable to access the folate receptors on the apical membranes of the kidney proximal tubules, no kidney or other normal tissue cytotoxicity is observed. These data suggest that retargeting of haptens to folate receptor-expressing cancers might constitute a method for mobilizing the immune system specifically against poorly immunogenic tumors.

L3 ANSWER 10 OF 25 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 1999286124 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10356282
TITLE: High-affinity folate receptor in human ovary, serous ovarian adenocarcinoma, and ascites: radioligand binding

mechanism, molecular size, ionic properties, hydrophobic domain, and immunoreactivity.

AUTHOR: Holm J; Hansen S I; Hoier-Madsen M; Birn H; Helkjaer P E
CORPORATE SOURCE: Department of Clinical Chemistry, Central Hospital,
Herning, Denmark.
SOURCE: Archives of biochemistry and biophysics, (1999 Jun
15) Vol. 366, No. 2, pp. 183-91.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199907
ENTRY DATE: Entered STN: 15 Jul 1999
Last Updated on STN: 15 Jul 1999
Entered Medline: 7 Jul 1999

AB High-affinity folate receptors are expressed in normal ovaries and ovarian carcinomas. Binding of [³H]folate in human ovary, serous ovarian carcinoma tissue, and ascites is a complex process that has not been well characterized. This study shows changes in binding affinity and mechanism of binding with decreasing receptor concentration, inhibition by folate derivatives, and a slow radioligand dissociation at pH 7.4 becoming rapid and complete at pH 3.5. The receptor seems to be positively charged since it elutes in the front effluent of a DEAE-Sepharose CL-6B ion-exchange column at pH 6.3. The gel filtration profile of Triton X-100-solubilized tissue and ascites contained two peaks of radioligand-bound receptor (25 and 100 kDa). Exposure of ascites to cleavage by phosphatidylinositol-specific phospholipase C resulted in a partial conversion of the 100-kDa peak to a 25-kDa peak. This suggests that the receptor may be anchored to the membrane by a glycosylphosphatidyl residue that inserts into Triton X-100 micelles, resulting in a large molecular size on gel filtration. The receptor in ovarian carcinoma tissue immunoreacts with antibodies against purified human milk folate receptor protein as shown by enzyme-linked immunosorbent assay, immunoprecipitation, sodium dodecyl sulfate-polyacrylamide gel electrophoresis immunoblotting (a single band of 45 kDa), and immunohistochemistry. In only three of seven ovarian carcinomas did expression of radioligand-bound receptors exceed levels found in five normal ovaries. However, only receptors in ovarian carcinoma specimens showed a high degree of immunoreactivity. Hence, even without elevations of the total receptor level, a folate receptor isoform homologous to human milk folate receptor protein seemed to prevail in serous ovarian carcinomas.
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L3 ANSWER 11 OF 25 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 1998033926 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9367057
TITLE: Folate receptors in malignant and benign tissues of human female genital tract.
AUTHOR: Holm J; Hansen S I; Hoier-Madsen M; Helkjaer P E; Nichols C W
CORPORATE SOURCE: Department of Clinical Chemistry, Horsens Hospital,
Denmark.
SOURCE: Bioscience reports, (1997 Aug) Vol. 17, No. 4,
pp. 415-27.
Journal code: 8102797. ISSN: 0144-8463.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199801
ENTRY DATE: Entered STN: 30 Jan 1998
Last Updated on STN: 30 Jan 1998
Entered Medline: 20 Jan 1998

AB We have characterized the folate receptor in malignant and benign tissues of human female genital tract (Fallopian tube and benign and malignant tissues of uterus). Radioligand binding displayed characteristics similar to those of other folate binding proteins. Those include a high-affinity type of binding ($K = 10(10)M^{-1}$), apparent positive cooperativity, a slow dissociation at pH 7.4 becoming rapid at pH 3.5, and inhibition of binding by folate analogues. The gel filtration profile of Triton X-100 solubilized tissue contained two large peaks of 3H-folate labelled protein (> = 130 and 100 kDa) as well as a 25 kDa peak. Only a single band of 70 kDa was seen on SDS-PAGE immunoblotting. The large molecular size forms on gel filtration appear to represent folate receptors having a hydrophobic membrane anchor inserted into Triton X-100 micelles. The folate receptor of female genital tract showed cross-reactivity in ELISA and positive immunostaining with rabbit antibodies against human milk folate binding protein. Variations in the ratio of immunoresponse to total high affinity folic acid binding suggests the presence of multiple isoforms of the receptor in different types of malignant and benign tissues.

L3 ANSWER 13 OF 25 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 97070602 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8913528
TITLE: Characterization of the folate receptor in human molar placenta.
AUTHOR: Holm J; Hansen S I; Nichols C W; Hoier-Madsen M; Helkjaer P E
CORPORATE SOURCE: Department of Clinical Chemistry, Horsens Hospital, Denmark.
SOURCE: Bioscience reports, (1996 Oct) Vol. 16, No. 5, pp. 379-89.
Journal code: 8102797. ISSN: 0144-8463.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY DATE: Entered STN: 24 Apr 1997
Last Updated on STN: 24 Apr 1997
Entered Medline: 14 Apr 1997

AB We have characterized a high-affinity folate receptor in human molar placenta tissue. Radioligand binding exhibited characteristics typical of other high-affinity folate binding proteins. Those included, positive cooperativity, a tendency to increased binding affinity with decreasing receptor concentration, a slow ligand dissociation at pH 7.4 becoming rapid at pH 3.5, and inhibition by folate analogues. The folate receptor cross-reacted with antibodies against human milk folate binding protein, e.g. the syncytiotrophoblastic layer of molar placenta tissue sections showed strongly positive immunostaining. The gel filtration profile contained two radioligand-bound peaks (25 and 100 kDa), however, with considerable overlap. Only a single band of 70 kDa was seen on SDS-PAGE immunoblotting. The folate receptor in placental tissue may play a crucial role in the transfer of folate from maternal circulation to the fetus.

L3 ANSWER 15 OF 25 MEDLINE on STN DUPLICATE 15

ACCESSION NUMBER: 96163445 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8562026
TITLE: A high-affinity soluble folate receptor in fluids of non-neoplastic ovarian cysts: radioligand binding, molecular size, hydrophobic residue, and immunological properties.
AUTHOR: Holm J; Hansen S I; Hoier-Madsen M; Helkjaer P E; Bzorek M
CORPORATE SOURCE: Department of Clinical Chemistry, Central Hospital, Nykobing Falster, Denmark.
SOURCE: APMIS : acta pathologica, microbiologica, et immunologica Scandinavica, (1995 Dec) Vol. 103, No. 12, pp. 862-8.
Journal code: 8803400. ISSN: 0903-4641.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199603
ENTRY DATE: Entered STN: 15 Mar 1996
Last Updated on STN: 15 Mar 1996
Entered Medline: 7 Mar 1996

AB The presence of a soluble folate receptor in fluids of non-neoplastic ovarian cysts was demonstrated. Radioligand binding exhibited characteristics typical of high-affinity folate-binding proteins. These included positive cooperativity, a tendency to increased binding affinity with decreasing receptor concentration, a slow ligand dissociation at pH 7.4 and inhibition by folate analogues. The folate receptor was probably synthesized in the lining epithelial cells of the cysts which showed positive immunostaining with antibodies against human milk folate-binding protein. The gel filtration profile of cystic fluid contained two radioligand-bound peaks, 25 and 100 kDa, whereas a single band of 70 kDa was seen on SDS-PAGE immunoblotting. Treatment with the enzyme phosphatidylinositol-specific phospholipase C resulted in a partial conversion of the 100 kDa peak to the 25 kDa peak. This suggests that insertion of a hydrophobic glycosylphosphatidylinositol tail into Triton X-100 micelles could give rise to large molecular size forms of the receptor on gel filtration.

L3 ANSWER 16 OF 25 MEDLINE on STN DUPLICATE 16
ACCESSION NUMBER: 96085076 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7488388
TITLE: Folate receptor in malignant effusions of ovarian carcinoma.
AUTHOR: Holm J; Hansen S I; Hoier-Madsen M; Helkjaer P E; Bzorek M
CORPORATE SOURCE: Department of Clinical Chemistry, Central Hospital Nykobing Falster, Denmark.
SOURCE: APMIS : acta pathologica, microbiologica, et immunologica Scandinavica, (1995 Sep) Vol. 103, No. 9, pp. 663-70.
Journal code: 8803400. ISSN: 0903-4641.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: (CASE REPORTS)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199601
ENTRY DATE: Entered STN: 25 Jan 1996
Last Updated on STN: 25 Jan 1996
Entered Medline: 4 Jan 1996

AB Binding of 3H-folate in human ovarian adenocarcinoma tissue was of a

high-affinity type (K_d approximately 10(10) M $^{-1}$) and displayed apparent positive cooperativity. A high-affinity folate receptor was also present in ascitic fluid and pleural effusion. Radioligand dissociation was slow at pH 7.4, but rapid at pH 3.5. The folate analogues methotrexate and in particular 5-formyltetrahydrofolate acted as inhibitors of 3H-folate binding in ascitic fluid. Ovarian adenocarcinoma tissue showed immunostaining with rabbit antibodies against human milk folate-binding protein. The gel filtration diagram contained two peaks of radiolabelled folate (at 25 and 100 kDa). The 25 kDa peak was predominant in ascitic fluid and pleural effusion. A single band of 70 kDa was seen on SDS-PAGE immunoblotting of tissue and malignant effusions. The concentration of folate receptor in tissue and fluid specimens could be determined by an immunochemical method (ELISA) utilizing antibodies against human milk folate-binding protein.

L3 ANSWER 17 OF 25 MEDLINE on STN DUPLICATE 17
ACCESSION NUMBER: 91086466 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1702099
TITLE: Megaloblastic hematopoiesis in vitro. Interaction of anti-folate receptor antibodies with hematopoietic progenitor cells leads to a proliferative response independent of megaloblastic changes.
AUTHOR: Antony A C; Bridgell R A; Brandt J E; Straneva J E; Verma R S; Miller M E; Kalasinski L A; Hoffman R
CORPORATE SOURCE: Department of Medicine, Indiana University School of Medicine, Indianapolis 46202-5121.
CONTRACT NUMBER: R01 AA08307 (NIAAA)
R01 HD 20889 (NICHD)
SOURCE: The Journal of clinical investigation, (1991 Jan) Vol. 87, No. 1, pp. 313-25.
Journal code: 7802877. ISSN: 0021-9738.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199102
ENTRY DATE: Entered STN: 22 Mar 1991
Last Updated on STN: 29 Jan 1996
Entered Medline: 1 Feb 1991

We tested the hypothesis that anti-placental folate receptor (PFR) antiserum-mediated effects on hematopoietic progenitor cells *in vitro* of increased cell proliferation and megaloblastic morphology were independent responses. We determined that (a) purified IgG from anti-PFR antiserum reacted with purified apo- and holo-PFR and specifically immunoprecipitated a single (44-kD) iodinated moiety on cell surfaces of low density mononuclear cells (LDMNC); (b) when retained in culture during *in vitro* hematopoiesis, anti-PFR IgG (in contrast to PFR-neutralized anti-PFR IgG and nonimmune IgG) consistently led to increased cloning efficiency of colony forming unit-erythroid (CFU-E), burst forming unit-E (BFU-E), CFU-granulocyte macrophage (CFU-GM), and CFU-GEMM megakaryocyte (CFU-GEMM), and objectively defined megaloblastic changes in orthochromatic normoblasts from CFU-E- and BFU-E-derived colonies; (c) when anti-PFR antiserum was removed after initial (less than 1 h) incubation with LDMNC, a cell proliferation response was induced, but megaloblastic changes were not evident. (d) Conversely, delay at 4 degrees C for 24 h before long-term plating with antiserum resulted in megaloblastosis without increased cell proliferation; (e) however, 500-fold molar excess extracellular folate concentrations completely abrogated the expected anti-PFR antiserum-induced megaloblastic changes, without altering cell proliferative responses. Thus, although cell proliferative and megaloblastic changes are induced after short-term and

prolonged interaction of antibody with folate receptors on hematopoietic progenitors, respectively, they are independent effects.

L3 ANSWER 19 OF 25 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1999:308455 BIOSIS
DOCUMENT NUMBER: PREV199900308455
TITLE: The folate receptor as a potential therapeutic anticancer target.
AUTHOR(S): Gruner, Barbara A. [Reprint author]; Weitman, Steven D. [Reprint author]
CORPORATE SOURCE: Department of Pediatrics, University of Texas Health Science Center, San Antonio, TX, USA
SOURCE: Investigational New Drugs, (1998-1999) Vol. 16, No. 3, pp. 205-219. print.
CODEN: INNDDK. ISSN: 0167-6997.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Aug 1999
Last Updated on STN: 12 Aug 1999

L3 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:434882 CAPLUS
DOCUMENT NUMBER: 135:45191
TITLE: Methods and compositions for use in the treatment of filovirus mediated disease conditions
INVENTOR(S): Goldsmith, Mark A.; Chan, Stephen Y.
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2001041784 | A1 | 20010614 | WO 2000-33403 | 20001207 <-- |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2003082517 | A1 | 20030501 | US 2000-733395 | 20001208 <-- |
| US 6933108 | B2 | 20050823 | | |
| US 2005266022 | A1 | 20051201 | US 2005-104211 | 20050411 |
| PRIORITY APPLN. INFO.: | | | US 1999-170004P | P 19991209 |
| | | | US 2000-237421P | P 20001002 |
| | | | US 2000-733395 | A3 20001208 |

AB Methods and compns. are provided for at least slowing the progression of a filovirus mediated disease condition in a host. In the subject methods, an effective amount of an agent that at least reduces the amount of folate receptor mediated filovirus cell entry is administered to the host. The subject methods find use in both the prevention and treatment of filovirus associated disease conditions, including Marburg and Ebola-Zaire virus mediated disease conditions.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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AT 10:37:01 ON 26 JUN 2007
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FILE 'BIOSIS' ENTERED AT 10:37:01 ON 26 JUN 2007
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|--|------------------|---------------|
| FULL ESTIMATED COST | 31.68 | 31.89 |
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| CA SUBSCRIBER PRICE | -0.78 | -0.78 |

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L1 0 S (FOLATE RECEPTOR) (S) AUTOANTIBODIES AND PD<=20031107
L2 69 S (FOLATE (W) RECEPTOR) (S) AUTOANTIBODIES AND PD<=20031107
L3 25 DUP REM L2 (44 DUPLICATES REMOVED)

=> S (FOLATE RECEPTOR) (S) AUTOANTIBODIES
L4 14 (FOLATE RECEPTOR) (S) AUTOANTIBODIES

=> Dup Rem L4
PROCESSING COMPLETED FOR L4
L5 7 DUP REM L4 (7 DUPLICATES REMOVED)
ANSWERS '1-3' FROM FILE MEDLINE
ANSWER '4' FROM FILE BIOSIS
ANSWERS '5-7' FROM FILE CAPLUS

=> D Ti L5 1-7

| | | |
|---|----------------|--------------|
| L5 ANSWER 1 OF 7 | MEDLINE on STN | DUPPLICATE 1 |
| TI Maternal folate receptor autoantibodies and cleft lip and/or palate. | | |
| L5 ANSWER 2 OF 7 | MEDLINE on STN | DUPPLICATE 2 |

TI Autoantibodies to folate receptors in the cerebral folate deficiency syndrome.
L5 ANSWER 3 OF 7 MEDLINE on STN DUPLICATE 3
TI Autoantibodies against folate receptors in women with a pregnancy complicated by a neural-tube defect.
L5 ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Could maternal autoantibodies against folate receptor-membrane proteins cause spontaneous abortion or congenital heart defects?.
L5 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
TI Prevention and therapy of cerebral folate deficiency
L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
TI Immunoassay for detection of autoantibodies to folate binding protein
L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
TI Assay for autoantibodies to folate receptors

=> D ibib abs L5 1-7

L5 ANSWER 1 OF 7 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006223898 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16546188
TITLE: Maternal folate receptor autoantibodies and cleft lip and/or palate.
AUTHOR: Bliek J B; Rothenberg S P; Steegers-Theunissen R P M
CORPORATE SOURCE: Department of Obstetrics and Gynecology/Division of Obstetrics and Prenatal Medicine, Erasmus MC, University Medical Center, Rotterdam, Nijmegen, The Netherlands.
SOURCE: International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics, (2006 May) Vol. 93, No. 2, pp. 142-3. Electronic Publication: 2006-03-20.
Journal code: 0210174. ISSN: 0020-7292.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200610
ENTRY DATE: Entered STN: 25 Apr 2006
Last Updated on STN: 1 Nov 2006
Entered Medline: 31 Oct 2006

L5 ANSWER 2 OF 7 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2005249651 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15888699
TITLE: Autoantibodies to folate receptors in the cerebral folate deficiency syndrome.
AUTHOR: Ramaekers Vincent T; Rothenberg Sheldon P; Sequeira Jeffrey M; Opladen Thomas; Blau Nenad; Quadros Edward V; Selhub Jacob
CORPORATE SOURCE: Division of Pediatric Neurology, Department of Pediatrics, University Hospital Aachen, Aachen, Germany.. vramaekers@ukaachen.de
SOURCE: The New England journal of medicine, (2005 May 12) Vol. 352, No. 19, pp. 1985-91.
Journal code: 0255562. E-ISSN: 1533-4406.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200505
ENTRY DATE: Entered STN: 13 May 2005
Last Updated on STN: 20 May 2005
Entered Medline: 19 May 2005

AB In infantile-onset cerebral folate deficiency, 5-methyltetrahydrofolate (5MTHF) levels in the cerebrospinal fluid are low, but folate levels in the serum and erythrocytes are normal. We examined serum specimens from 28 children with cerebral folate deficiency, 5 of their mothers, 28 age-matched control subjects, and 41 patients with an unrelated neurologic disorder. Serum from 25 of the 28 patients and 0 of 28 control subjects contained high-affinity blocking autoantibodies against membrane-bound folate receptors that are present on the choroid plexus. Oral folinic acid normalized 5MTHF levels in the cerebrospinal fluid and led to clinical improvement. Cerebral folate deficiency is a disorder in which autoantibodies can prevent the transfer of folate from the plasma to the cerebrospinal fluid.
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L5 ANSWER 3 OF 7 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2004014907 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14711912
TITLE: Autoantibodies against folate receptors in women with a pregnancy complicated by a neural-tube defect.
AUTHOR: Rothenberg Sheldon P; da Costa Maria P; Sequeira Jeffrey M; Cracco Joan; Roberts Jaclyn L; Weedon Jeremy; Quadros Edward V
CORPORATE SOURCE: Department of Medicine, State University of New York Downstate Medical Center, Brooklyn 11203, USA.. srothenberg@downstate.edu
SOURCE: The New England journal of medicine, (2004 Jan 8) Vol. 350, No. 2, pp. 134-42.
Journal code: 0255562. E-ISSN: 1533-4406.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200401
ENTRY DATE: Entered STN: 9 Jan 2004
Last Updated on STN: 17 Jan 2004
Entered Medline: 16 Jan 2004
AB BACKGROUND: In the absence of clinical folate deficiency, periconceptional supplementation with folic acid reduces a woman's risk of having an infant with a neural-tube defect. Since antiserum to folate receptors induces embryo resorption and malformations in rats, we hypothesized that autoantibodies against folate receptors in women may be associated with pregnancy complicated by a neural-tube defect. METHODS: Serum from 12 women who were or had been pregnant with a fetus with a neural-tube defect and from 24 control women (20 with current or prior normal pregnancies and 4 who were nulligravid) was analyzed for autoantibodies by incubation with human placental folate receptors radiolabeled with [³H]folic acid. The properties of these autoantibodies were characterized by incubating serum and the autoantibodies isolated from serum with placental membranes, ED27 cells, and KB cells, which express the folate receptors. RESULTS: Serum from 9 of 12 women

with a current or previous affected pregnancy (index subjects) and 2 of 20 control subjects contained autoantibodies against folate receptors ($P<0.001$). The autoantibodies blocked the binding of [^3H]folic acid to folate receptors on placental membranes and on ED27 and KB cells incubated at 4 degrees C and blocked the uptake of [^3H]folic acid by KB cells when incubated at 37 degrees C. CONCLUSIONS: Serum from women with a pregnancy complicated by a neural-tube defect contains autoantibodies that bind to folate receptors and can block the cellular uptake of folate. Further study is warranted to assess whether the observed association between maternal autoantibodies against folate receptors and neural-tube defects reflects a causal relation.

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L5 ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
 ACCESSION NUMBER: 2007:221688 BIOSIS
 DOCUMENT NUMBER: PREV200700221969
 TITLE: Could maternal autoantibodies against folate receptor-membrane proteins cause spontaneous abortion or congenital heart defects?
 AUTHOR(S): Neuman, Alan [Reprint Author]; Hernandez-Robles, Jose; Rothenberg, Sheldon; Hodge, Diana; Roczek, Aleksandra; Mathias, Leigh; Lizarralde, Jose; Huhta, James
 CORPORATE SOURCE: Univ S Florida, Tampa, FL USA
 SOURCE: American Journal of Obstetrics and Gynecology, (DEC 2006) Vol. 195, No. 6, Suppl. S, pp. S229.
 Meeting Info.: 27th Annual Meeting of the Society-of-Maternal-Fetal-Medicine. San Francisco, CA, USA. February 05 -10, 2007. Soc Maternal Fetal Med.
 CODEN: AJOGAH. ISSN: 0002-9378.
 DOCUMENT TYPE: Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LANGUAGE: English
 ENTRY DATE: Entered STN: 4 Apr 2007
 Last Updated on STN: 4 Apr 2007

L5 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:1206350 CAPLUS
 DOCUMENT NUMBER: 145:500132
 TITLE: Prevention and therapy of cerebral folate deficiency
 PATENT ASSIGNEE(S): Ramaekers, Vincent, Belg.
 SOURCE: PCT Int. Appl., 74pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2006119589 | A2 | 20061116 | WO 2006-BE45 | 20060504 |
| W: | AB, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, | | | |

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: WO 2005-BE74 A 20050511

AB The present invention relates to methods and means to prevent cerebral folate deficiency (CFD) and/or to treat CFD at a very early stage, when CFD has not yet fully developed. It was found that circulating and blocking autoantibodies to folate receptor (FR) represent one of the major causes of CFD and that prognosis improves the younger a child can be treated. The invention as such in particular relates to a method of screening infants and their mothers for the presence of circulating autoantibodies in their serum and/or for low 5-methyltetrahydrofolate (5MTHF) CSF levels, followed by a prompt treatment of a subject in need thereof with a folate supplement in case the testing procedure is pos. Such screening should also be performed for all children or any other subjects as soon as at least 3 of the major criteria of CFD manifest. It was further found that the addition of antioxidants to a folate supplement maintains stability of (5MTHF) and can help restore an impaired 5MTHF uptake in the nervous system due to the circulation of blocking autoantibodies. Avoidance of foods and products, containing proteins with similar amino acid sequences as compared to human FRs, is strongly preferred in the preparation of compds. or food products for the prevention and/or treatment of CFD. The methods and means of the invention have a major impact on the health of the population and can help to reduce the incidence of for instance autism and schizophrenia related to CFD.

L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:513611 CAPLUS

DOCUMENT NUMBER: 145:26550

TITLE: Immunoassay for detection of autoantibodies to folate binding protein

INVENTOR(S): Cabrera, Robert M.; Finnell, Richard

PATENT ASSIGNEE(S): The Texas A & M University System, USA

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2006058287 | A2 | 20060601 | WO 2005-US42906 | 20051128 |
| WO 2006058287 | A3 | 20061019 | | |
| W: | AB, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MM, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |

US 2006115860 A1 20060601 US 2005-288014 20051128

PRIORITY APPLN. INFO.: US 2004-631130P P 20041126

AB The present invention is directed to an assay that detects autoantibodies to folate receptor and can be used in the clin. diagnostic testing of these antibodies in humans. The assay described herein has several features that offer advantages over the

existing methods. Some of these features include adaptability to high-throughput processing, the use of an Ig antibody to bind autoantibodies bound to folate receptor or the use of enzyme-labeled folic acid to bind folate binding protein and use of fluorescence or chemiluminescence for detection. Using an ELISA-based assay, the disclosed invention demonstrated that folate-binding proteins from human, mouse, and cow could be used as probes for folate-binding proteins autoantibodies. This assay thereby avoids the use of radioactivity and can be automated and scaled to process hundreds of samples safely and simultaneously. The present invention is also directed to a diagnostic kit to detect autoantibodies to the folate receptor in serum from an individual. Serum samples are obtained from women during mid-gestational pregnancy carrying fetuses suspected of having neural tube defects, and the samples are tested to identify the presence, absence, and relative abundance of folate-binding protein autoantibodies.

L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:430678 CAPLUS

DOCUMENT NUMBER: 140:422391

TITLE: Assay for autoantibodies to folate receptors

INVENTOR(S): Rothenberg, Sheldon P.; Da Costa, Maria; Sequeira, Jeffrey

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004043233 | A2 | 20040527 | WO 2003-US35690 | 20031107 |
| WO 2004043233 | A3 | 20050331 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2505125 | A1 | 20040527 | CA 2003-2505125 | 20031107 |
| AU 2003291400 | A1 | 20040603 | AU 2003-291400 | 20031107 |
| EP 1558286 | A2 | 20050803 | EP 2003-768795 | 20031107 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006521532 | T | 20060921 | JP 2004-551956 | 20031107 |
| US 2006127955 | A1 | 20060615 | US 2005-534303 | 20051101 |
| PRIORITY APPLN. INFO.: | | | US 2002-424965P | P 20021108 |
| | | | WO 2003-US35690 | W 20031107 |

AB The present invention identifies autoantibodies to folate receptors. Methods to identify these autoantibodies to the human folate receptors are also provided. The present invention also contemplates diagnostic methods and test kits to be used in a clin. setting for identifying a subject at risk of folate-sensitive abnormalities or disorders as observed in neural tube defect complicated pregnancies. In addition, infertility,

spontaneous abortion, male sterility, unsuccessful in vitro fertilization, neurol. disorders and impaired folate absorption may also be associated with these autoantibodies to folate receptors.

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NEWS 6 JUL 16 Caplus enhanced with French and German abstracts
NEWS 7 JUL 18 CA/Caplus patent coverage enhanced
NEWS 8 JUL 26 USPATFUL/USPAT2 enhanced with IPC reclassification
NEWS 9 JUL 30 USGENE now available on STN
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NEWS 19 SEP 13 INPADOCDB enhanced with monthly SDI frequency
NEWS 20 SEP 17 CA/Caplus enhanced with printed CA page images from 1967-1998
NEWS 21 SEP 17 Caplus coverage extended to include traditional medicine patents
NEWS 22 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 23 OCT 02 CA/Caplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 24 OCT 19 BEILSTEIN updated with new compounds

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SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE'
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FILE 'MEDLINE' ENTERED AT 12:43:23 ON 12 NOV 2007
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=> S Autoantibody (S)detect? (S) Method AND @pd<=20021108
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L1 0 AUTOANTIBODY (S) DETECT? (S) METHOD AND @PD<=20021108

=> S Autoantibody (S)detect? (S) Method AND pd<=20021108
2 FILES SEARCHED...
L2 633 AUTOANTIBODY (S) DETECT? (S) METHOD AND PD<=20021108

=> S Autoantibody (S)detect? (S) Method (S)receptor AND pd<=20021108
2 FILES SEARCHED...
L3 38 AUTOANTIBODY (S) DETECT? (S) METHOD (S) RECEPTOR AND PD<=20021108
8

=> Dup Rem 13
PROCESSING COMPLETED FOR L3
L4 21 DUP REM L3 (17 DUPLICATES REMOVED)
ANSWERS '1-7' FROM FILE MEDLINE
ANSWERS '8-9' FROM FILE BIOSIS
ANSWERS '10-21' FROM FILE CAPLUS

=> D Ti 14 1-21

L4 ANSWER 1 OF 21 MEDLINE on STN DUPLICATE 1
TI Detection of functionally different types of pathological autoantibodies
against thyrotropin receptor in Graves' patients sera by luminescent
immunoprecipitation analysis.

L4 ANSWER 2 OF 21 MEDLINE on STN DUPLICATE 2
TI In vitro synthesized TSH receptor as a tool for autoantibody detection.

L4 ANSWER 3 OF 21 MEDLINE on STN DUPLICATE 3
TI Autoantibodies against integral membrane proteins of the nuclear envelope
in patients with primary biliary cirrhosis.

L4 ANSWER 4 OF 21 MEDLINE on STN DUPLICATE 4
TI Autoantibodies against brain septal region antigens specific to
unmedicated schizophrenia.

L4 ANSWER 5 OF 21 MEDLINE on STN DUPLICATE 5
TI Myasthenia gravis: antibodies to extracellularly exposed antigenic
determinants of acetylcholine receptor.

L4 ANSWER 6 OF 21 MEDLINE on STN DUPLICATE 6
TI Insulin-receptor autoantibody detected by
the human placental membrane method: six patients with insulin-
receptor autoantibody in japan.

L4 ANSWER 7 OF 21 MEDLINE on STN DUPLICATE 8
TI Direct method for detection and characterization of
cell surface receptors for insulin by means of ¹²⁵I-labeled
autoantibodies against the insulin receptor.

L4 ANSWER 8 OF 21 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
DUPLICATE 7
TI STUDIES ON INSULIN RECEPTOR AUTO ANTIBODIES USING THE HUMAN PLACENTAL
MEMBRANE METHOD 6 INSULIN RECEPTOR ANTIBODY POSITIVE PATIENTS FOUND IN
JAPAN.

L4 ANSWER 9 OF 21 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Methods of detecting disorders of the central nervous system by detecting autoantibodies which specifically bind ionotropic glutamate receptors.

L4 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Autoimmunity to angiotensin AT1 receptors in schizophrenia

L4 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Method for diagnosis and prognosis of epilepsy development in patients with preclinical stage involving fractal analysis of EEG and determination of paroxysmal activity test by detection of autoantibodies to quisqualate-binding membrane protein in blood

L4 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Clinical significance and assay of the autoantibodies against angiotensin II type 1-receptor and α 1-adrenergic receptor

L4 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Cancer detection method and reagents using autoantibodies produced by immortalized monocytes

L4 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Human thyrotropin receptor compositions and use thereof

L4 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Immunoassay and kit for detecting autoantibody against thyroid stimulating hormone receptor

L4 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Assays for TSH receptor autoantibodies

L4 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Method for production of purified, optionally radioiodinated TSH receptor preparations for use in diagnostics and therapy

L4 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Tumor suppressor

L4 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Detection of thyroidal autoantibodies

L4 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Detection of autoantibodies to the thyrotropin receptor

L4 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
TI Methods of detecting and combating disorders of the central nervous system

=> Log Off H
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STN INTERNATIONAL SESSION SUSPENDED AT 12:50:24 ON 12 NOV 2007

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|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 36.78 | 36.99 |

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FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 11:40:40 ON 12 NOV 2007
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L2 633 S AUTOANTIBODY (S)DETECT? (S) METHOD AND PD<=20021108
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L4 21 DUP REM L3 (17 DUPLICATES REMOVED)

=> D ibib abs L4 1, 3-9, 11-17, 19-21

L4 ANSWER 1 OF 21 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2000385089 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10826518
TITLE: Detection of functionally different types of pathological autoantibodies against thyrotropin receptor in Graves' patients sera by luminescent immunoprecipitation analysis.
AUTHOR: Minich W B; Loos U
CORPORATE SOURCE: Department of Internal Medicine I, University of Ulm, Germany.
SOURCE: Experimental and clinical endocrinology & diabetes : official journal, German Society of Endocrinology [and] German Diabetes Association, (2000) Vol. 108, No. 2, pp. 110-9.
PUB. COUNTRY: Journal code: 9505926. ISSN: 0947-7349.
DOCUMENT TYPE: GERMANY: Germany, Federal Republic of
 Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 18 Aug 2000
 Last Updated on STN: 18 Aug 2000
 Entered Medline: 10 Aug 2000

AB We describe a new method for the detection of different types of pathological autoantibodies against TSH receptor (TSHR) in Graves' patients sera by luminescent immunoprecipitation analysis. For this purpose three different chimeras composed of human TSHR and rat luteotropin/choriogonadotropin receptor (LH-CGR) were constructed, as was described previously (Tahara K, Ishikawa N, Yamamoto K, Hirai A, Ito K, Tamura Y, Yoshida S, Saito Y, Kohn LD. 1997 Thyroid 7:867-877). They were used in the immunoprecipitation reactions: (i) the wild type TSHR (for the detection of total TSHR autoantibodies), (ii) TSHR/LH-CGR chimera wherein TSHR amino acid residues 8-165 (epitopes for thyroid stimulating antibodies) are replaced by comparable LH-CGR

residues, (iii) TSHR/LH-CGR chimera wherein TSHR amino acids 261-370 (epitopes for thyroid blocking antibodies) are replaced by comparable LH-CGR residues, and (iv) TSHR/LH-CGR chimera wherein TSHR amino acids 8-165 and 261-370 are replaced by comparable LH-CGR residues (for the detection of neutral TSHR autoantibodies). DNA encoding the N-terminal 725 (of 764) amino acids of wild type TSHR (or TSHR/LH-CGR chimera) was fused to the cDNA for the 550-amino acid firefly luciferase. The hybrid proteins were produced in HeLa cells using recombinant vaccinia viruses. All fusion proteins retained the enzymatic activity of firefly luciferase and TSHR-LUC interacted with TSH with the same affinity as wild type receptor. The luciferase tagged TSHR and TSHR/LH-CGR chimeras were used for the detection of different types of TSHR autoantibodies (i.e. total, neutral, thyroid stimulating and thyroid blocking) in 63 Graves' disease and 62 normal sera by immunoprecipitation analysis. The data demonstrated positive correlation between results of immunoprecipitation assay and results obtained using cAMP bioassay or assay for TSH binding inhibitory immunoglobulins in test sera.

L4 ANSWER 3 OF 21 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 94102477 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8276182
TITLE: Autoantibodies against integral membrane proteins of the nuclear envelope in patients with primary biliary cirrhosis.
AUTHOR: Nickowitz R E; Wozniak R W; Schaffner F; Worman H J
CORPORATE SOURCE: Department of Medicine, Mount Sinai School of Medicine, New York, New York.
SOURCE: Gastroenterology, (1994 Jan) Vol. 106, No. 1, pp. 193-9.
JOURNAL code: 0374630. ISSN: 0016-5085.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199402
ENTRY DATE: Entered STN: 18 Feb 1994
Last Updated on STN: 18 Feb 1994
Entered Medline: 7 Feb 1994
AB BACKGROUND/AIMS: Autoantibodies against nuclear membrane proteins have been identified in patients with primary biliary cirrhosis (PBC). The aim of the present study was to determine the incidence of these autoantibodies in patients with PBC and examine their significance. METHODS: An assay using recombinant polypeptides was designed to unequivocally detect autoantibodies against gp210 and the lamin B receptor, integral proteins of the nuclear membranes. RESULTS: Autoantibodies against gp210 were detected in 15 of 159 patients with PBC and 0 of 46 controls. Autoantibodies against lamin B receptor were detected in 2 patients with PBC and 0 controls. The presence of these autoantibodies had a sensitivity of 11% and specificity of 100% for the diagnosis of PBC. Autoantibodies against gp210 were present in 4 of 19 (21%) patients with PBC who did not have detectable antimitochondrial antibodies. Patients with PBC and gp210 autoantibodies had a higher incidence of associated arthritis. CONCLUSIONS: Autoantibodies against gp210 and the lamin B receptor are present in approximately 10% of patients with PBC. These autoantibodies are highly specific for the diagnosis of PBC and may be useful in diagnosing individuals without antimitochondrial antibodies and in identifying a subgroup of patients with an increased incidence of associated arthritis.

L4 ANSWER 4 OF 21 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 91027985 MEDLINE

DOCUMENT NUMBER: PubMed ID: 2223917
TITLE: Autoantibodies against brain septal region antigens specific to unmedicated schizophrenia?
AUTHOR: Knight J G; Knight A; Menkes D B; Mullen P E
CORPORATE SOURCE: Department of Psychological Medicine, University of Otago Medical School, Dunedin, New Zealand.
SOURCE: Biological psychiatry, (1990 Sep 15) Vol. 28, No. 6, pp. 467-74.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199012
ENTRY DATE: Entered STN: 8 Feb 1991
Last Updated on STN: 8 Feb 1991
Entered Medline: 7 Dec 1990
AB Health et al. (1989) reported that serum from 96% of unmedicated schizophrenic patients contained IgG autoantibodies specific for the septal region of rhesus monkey brain, compared with 0% of nonschizophrenic control subjects and 6% of schizophrenic patients who were on neuroleptic medication. Using the same technique of crossed immunolectrophoresis, we have tried to replicate this finding. In contrast to the original report, we observed "positive" precipitin arcs with IgG concentrates from all 14 serum samples tested. The failure of immunolectrophoretic methods to provide convincing evidence of pathogenic autoantibodies in schizophrenia in no way detracts from the hypothesis that autoimmune processes are involved in some forms of schizophrenia. Such methods have not proved useful in established autoimmune diseases such as Graves' disease and myasthenia gravis in which the pathogenic autoantibodies against cell-surface receptors can only be detected by assays which measure functional interactions with such receptors

L4 ANSWER 5 OF 21 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 87015278 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2429233
TITLE: Myasthenia gravis: antibodies to extracellularly exposed antigenic determinants of acetylcholine receptor.
AUTHOR: Oda K; Shibasaki H
SOURCE: Neurology, (1986 Oct) Vol. 36, No. 10, pp. 1374-7.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198611
ENTRY DATE: Entered STN: 2 Mar 1990
Last Updated on STN: 2 Mar 1990
Entered Medline: 3 Nov 1986
AB We have used a simple method to detect autoantibodies that react with extracellularly exposed antigenic determinants of acetylcholine receptor (AChR) of cultured rat muscle. Immunoglobulins from 30 patients with myasthenia gravis contained antibodies to detergent-solubilized AChR and bound to extracellularly exposed AChR. The antibody titer with solubilized rat AChR did not correlate with clinical severity, but ability of antibody to bind to extracellularly exposed AChR did correlate well and was also closely related to the acceleration of AChR degradation.

L4 ANSWER 6 OF 21 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 83121025 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6760461
TITLE: Insulin-receptor autoantibody
detected by the human placental membrane
method: six patients with insulin-receptor
autoantibody in Japan.
AUTHOR: Omori Y; Minei S; Saito M; Hirata Y
SOURCE: The Tohoku journal of experimental medicine, (1982 Nov) Vol. 138, No. 3, pp. 319-28.
Journal code: 0417355. ISSN: 0040-8727.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198303
ENTRY DATE: Entered STN: 18 Mar 1990
Last Updated on STN: 3 Mar 2000
Entered Medline: 11 Mar 1983

AB Insulin-receptor antibodies were detected in six patients out of 61 diabetics from all over Japan during 1975 to 1979 using the human placental membrane method. These 61 patients were divided into three categories: (1) Those whose diabetes control needed more than 80 units of insulin a day; (2) those whose fasting IRI was higher than 50 microU/ml even with glucose intolerance; and (3) those who had hypoglycemia of unknown origin. Controls consisted of 11 serum samples from 11 healthy women and six diabetics treated with insulin and thus having insulin antibodies in their sera. The sera from healthy subjects did not suppress ^{125}I -insulin binding with human placental membrane in either the direct or the preincubation method. ^{125}I -insulin binding in the direct method was markedly suppressed, however, by the sera of insulin-treated diabetics, although no such suppression was observed with the preincubation method. In six of the 61 subjects (two males and four females), inhibition of binding was proved by both direct and preincubation methods for the protein fraction of the sera, particularly for the IgG fraction in five cases. Three of the six had Sjogren syndrome; one of these also had acanthosis nigricans. Four of the six showed insulin resistance, and two did not. A follow-up showed that antibodies decreased relatively quickly in three of the six cases, with the degree of inhibition paralleling patients' clinical courses.

L4 ANSWER 7 OF 21 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 77058077 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1069300
TITLE: Direct method for detection and
characterization of cell surface receptors for
insulin by means of ^{125}I -labeled autoantibodies
against the insulin receptor.
AUTHOR: Jarrett D B; Roth J; Kahn C R; Flier J S
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1976 Nov) Vol. 73, No.
11, pp. 4115-9.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197701
ENTRY DATE: Entered STN: 13 Mar 1990
Last Updated on STN: 3 Mar 2000
Entered Medline: 29 Jan 1977

AB Autoantibodies directed against the cell surface receptors for insulin are found in some patients with extreme insulin resistance. These antibodies specifically inhibit the binding of insulin to its receptor. A purified IgG fraction from one patient's plasma was labeled with 125I. The 125I-labeled antireceptor antibody, which initially represented about 0.3% of the total 125I-IgG, was enriched by selective adsorption and subsequent elution from cells rich in insulin receptors. The 125I-antireceptor antibody bound to cells and the binding was inhibited by whole plasma and purified IgG from this patient, as well as whole plasma from another patient with autoantibodies to the insulin receptor. Insulins that differed 300-fold in biological potency and affinity inhibited binding of 125I-antireceptor antibody in direct proportion to their ability to bind to the insulin receptor. The binding of 125I-antireceptor antibody was closely correlated with the binding of 125I-insulin over a wide range of receptor concentrations on different cell types. Experimentally induced reduction of the insulin receptor concentration was associated with parallel decreases in the binding of 125I-antireceptor antibody and 125I-insulin. The preparation of 125I-antireceptor antibody with a high specific activity by cytoadsorption and elution has provided a sensitive method for the detection of receptors and autoantibodies to cell surface components.

L4 ANSWER 8 OF 21 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
DUPLICATE 7

ACCESSION NUMBER: 1981:182767 BIOSIS
DOCUMENT NUMBER: PREV198171052759; BA71:52759
TITLE: STUDIES ON INSULIN RECEPTOR AUTO ANTIBODIES USING THE HUMAN
PLACENTAL MEMBRANE METHOD 6 INSULIN RECEPTOR ANTIBODY
POSITIVE PATIENTS FOUND IN JAPAN.

AUTHOR(S): OMORI Y [Reprint author]; MINEI S; HIRATA Y; TAKEI M
CORPORATE SOURCE: DIABETES CENT, TOKYO WOMEN'S MED COLL, TOKYO, JPN
SOURCE: Journal of the Japan Diabetes Society, (1980)
Vol. 23, No. 8, pp. 769-778.
CODEN: TONYA4. ISSN: 0021-437X.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: JAPANESE

AB Insulin-receptor autoantibodies among patients with insulin resistance were reported. Insulin-receptor autoantibodies were detected by using the human placental membrane method described previously. The 61 cases were divided into 3 groups: those whose diabetes control needed > 80 U insulin/day; those whose fasting immunoreactive insulin was > 50 μ U/ml even with glucose intolerance; and those who had idiopathic hypoglycemia. Serum samples from 11 healthy women and 6 diabetics treated with insulin, and thus having insulin antibodies in their serum, were used as controls. The binding of 125I-insulin with human placental membranes was not suppressed by either the direct or preincubation methods on adding the serum of healthy subjects. The direct method represents a way of simultaneously incubating 125I-insulin, membrane and patient serum. The preincubation method represents a way to incubate 125I-insulin and pre-washed membrane after 1 day of preincubation of the membrane with patient serum. The binding of 125I-insulin by the direct method was markedly suppressed by the serum of the insulin-treated diabetics, while such suppression was not observed by the preincubation method. In 6 patients (2 males and 4 females) among the 61, inhibition of the binding of 125I-insulin with the membranes was shown by both the direct and preincubation methods. Evidence of the inhibition was found in the protein fraction of the serum from these 6 patients, particularly in the IgG fraction of 4. Of the 6 patients, 3 had the Sjogren syndrome, with 1 of these also having acanthosis nigricans. Of the 6 patients, 4 showed insulin resistance, while 1 of the remaining 2 had spontaneous hypoglycemia. A follow-up check revealed that, in 3 of

the 6 cases, the antibodies decreased relatively quickly, paralleling the degree of inhibition of the binding action and occurrence of hypoglycemic attacks. The existence of patients with insulin receptor antibodies but without insulin resistance is demonstrated, as evidenced by the 6 patients identified through the human placental membrane method.

L4 ANSWER 9 OF 21 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:45143 BIOSIS
DOCUMENT NUMBER: PREV200200045143
TITLE: Methods of detecting disorders of the central nervous system by detecting autoantibodies which specifically bind ionotropic glutamate receptors.
AUTHOR(S): Rogers, S. W. [Inventor]; McNamara, J. O. [Inventor]; Heinemann, S. F. [Inventor]
CORPORATE SOURCE: Salt Lake City, Utah, USA
ASSIGNEE: DUKE UNIVERSITY; THE SALK INSTITUTE FOR BIOLOGICAL STUDIES
PATENT INFORMATION: US 5529898 19960625
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (June 25, 1996) Vol. 1187, No. 4, pp. 2803-2804. print.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Jan 2002
Last Updated on STN: 25 Feb 2002

L4 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:82656 CAPLUS
DOCUMENT NUMBER: 138:219706
TITLE: Method for diagnosis and prognosis of epilepsy development in patients with preclinical stage involving fractal analysis of EEG and determination of paroxysmal activity test by detection of autoantibodies to quisqualate-binding membrane protein in blood
INVENTOR(S): Gromov, S. A.; Khorshev, S. K.; Korsakova, E. A.
PATENT ASSIGNEE(S): Sankt-Peterburgskii Nauchno-Issledovatel'skii Psichonevrolodicheskii Institut, Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|--------------|
| RU 2188575 | C1 | 20020910 | RU 2001-104475 | 20010220 <-- |
| PRIORITY APPLN. INFO.: | | | RU 2001-104475 | 20010220 |

AB A method for diagnosis and prognosis of epilepsy development in patients with preclin. stage involving fractal anal. of EEG and the determination of paroxysmal activity test by the detection of autoantibodies to quisqualate-binding membrane protein in the blood is presented. Epileptization index (EI) is calculated from formula: EI = PAT x D, where PAT is the paroxysmal activity test, and D is the fractal dimensionality value obtained by fractal anal. of EEG. At an EI value of 132.54 ± 5.32 , clin. stage of epilepsy is diagnosed. At an EI value of 45.05 ± 3.31 , the absence of epilepsy is stated. At an EI value of $45.05 \pm 3.31 - 132.54 \pm 5.32$, preclin. stage of epilepsy is diagnosed. At an D>0.70, PAT>150, and EI>105, antiepileptic therapy is started to prevent the

development of clin. stage of epilepsy.

L4 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:680663 CAPLUS
DOCUMENT NUMBER: 140:161959
TITLE: Clinical significance and assay of the autoantibodies against angiotensin II type 1-receptor and α_1 -adrenergic receptor
AUTHOR(S): Wang, Min; Wei, Yuniao; Liao, Yuhua
CORPORATE SOURCE: Tongji Medical College, Huazhong University of Science & Technology, Wuhan, 430022, Peop. Rep. China
SOURCE: Zhonghua Jianyan Yixue Zazhi (2002), 25(4), 226-228
CODEN: ZJYZZAP; ISSN: 1009-9158
PUBLISHER: Zhonghua Yixuehui Zazhishe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The method of screening the autoantibodies against angiotensin II type 1-receptor (AT1-receptor) and α_1 -adrenergic receptor was established by ELISA and the relation between the autoantibodies and hypertension was evaluated. The epitope of the extracellular loops of AT1-receptor (amino acid sequence from 165 to 191) and of α_1 -adrenergic receptor (amino acid sequence from 192 to 218) were synthesized and used as antigens to screen the autoantibodies by ELISA. The autoantibodies were assayed in 98 patients with hypertension uncontrolled, 96 patients with hypertension controlled and 40 normotensives. The intra- and inter-assay CVs were 0.066, 0.072 and 0.097, resp. in the autoantibody pos. control group; after absorbed by antigen, the absorbency (A) decreased by 2.5 and 2.3 folds, resp. In 98 patients, there were 41 patients (41.8%) with autoantibodies against AT1-receptor pos., 36 patients (36.7%) with against α_1 -adrenergic receptor pos. The pos. rate of autoantibodies was significantly higher in the uncontrolled hypertension group than that in controlled hypertension group (10.42% and 13.54%) and normotensives group (7.5% and 5%), all. The study suggests that ELISA is a simple, specific and sensitive method to detect the autoantibodies against AT1-receptor and α_1 -adrenergic receptor, which is useful for monitoring the patients with hypertension.

L4 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:402103 CAPLUS
DOCUMENT NUMBER: 133:40237
TITLE: Cancer detection method and reagents using autoantibodies produced by immortalized monocytes
INVENTOR(S): Robertson, John Russell; Graves, Catherine Rosamund Louise; Price, Michael Rawling
PATENT ASSIGNEE(S): The University of Nottingham, UK
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| WO 2000034787 | A1 | 20000615 | WO 1999-GB4182 | 19991210 <-- |
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
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 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 CA 2354702 A1 20000615 CA 1999-2354702 19991210 <--
 EP 1137943 A1 20011004 EP 1999-959578 19991210 <--
 EP 1137943 B1 20060329
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 IE, SI, LT, LV, FI, RO, CY
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 AT 322014 T 20060415 AT 1999-959578 19991210
 ES 2257087 T3 20060716 ES 1999-959578 19991210
 PT 1137943 T 20060831 PT 1999-959578 19991210
 US 7205117 B1 20070417 US 2001-857739 20010608
 PRIORITY APPLN. INFO.: GB 1998-27228 A 19981210
 WO 1999-GB4182 W 19991210

AB Sensitive and specific methods are provided for use in detecting the presence of cancer marker proteins in the body fluids of a mammal. Also provided are autoantibodies for use in these methods, and immortalized cells which are a source of the autoantibodies. Serum samples were assayed by ELISA using immobilized autoantibodies produced by B lymphocytes derived from patients with breast cancer. The assay had high sensitivity for cancer-associated forms of MUC1 protein.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:84955 CAPLUS

DOCUMENT NUMBER: 132:117962

TITLE: Human thyrotropin receptor compositions and use thereof

INVENTOR(S): Rapoport, Basil; McLachlan, Sandra M.

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 179 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2000005345 | A1 | 20000203 | WO 1999-US16636 | 19990721 <-- |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, LZ, LC, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TR, TT | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 9951245 | A1 | 20000214 | AU 1999-51245 | 19990721 <-- |
| PRIORITY APPLN. INFO.: | | | US 1998-93533P | P 19980721 |
| | | | WO 1999-US16636 | W 19990721 |

AB TSHR compns. and methods of use are disclosed, useful for diagnostic and therapeutic purposes. Recombinant nucleic acid sequences encoding a secreted, soluble, complex carbohydrate-containing form of the TSHR ectodomain, in a replicatable vector is claimed as are the expressed polypeptides. The TSHR ectodomain is C-terminal truncated and is selected from the group consisting of TSHR-261 through TSHR-309. The polypeptide can addnl. comprise histidine residues at its carboxyl terminus. A host cell comprising the recombinant nucleic acid sequence of the invention and a method of producing the TSHR ectodomain using the host cells are also

claimed. Antibodies against the polypeptides of the invention are claimed. Improvement to the TSH binding inhibition assay using host cells and polypeptides of the invention is claimed. A method is claimed of detecting directly, by flow cytometry, binding of autoantibodies in a patient's serum to native TSHR, comprising use in a flow cytometric assay of a Chinese Hamster Ovary cell line which over-expresses the TSHR holoreceptor. A method is claimed of directly detecting human autoantibodies against human TSHR in a biol. fluid sample comprising incubating a biol. fluid sample in the presence of a solid support comprising a capture ligand capable of binding said autoantibodies, washing said solid support to remove unbound material, incubating said solid support comprising said autoantibodies bound thereto in the presence of a secreted, soluble, complex carbohydrate-containing form of the TSHR ectodomain, washing said solid support to remove unbound material, and detecting said secreted, soluble, complex carbohydrate-containing form of the TSHR ectodomain bound to said autoantibodies bound to said solid support, thereby directly detecting human autoantibodies against human TSHR in said biol. fluid sample.

L4 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:254616 CAPLUS
DOCUMENT NUMBER: 132:289226
TITLE: Immunoassay and kit for detecting autoantibody against thyroid stimulating hormone receptor
INVENTOR(S): Watanabe, Yukihiko
PATENT ASSIGNEE(S): Cosmic Corporation K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|--------------------------------|
| JP 2000111559 | A | 20000421 | JP 1998-282717 | 19981005 <--
JP 1998-282717 |

PRIORITY APPLN. INFO.: AB Provided is a highly sensitive immunoassay method for detecting TSH receptor-specific autoantibody. The immunoassay uses 125I-labeled TSH and soluble TSH receptor in the presence of water soluble polymer (e.g. polyethylene glycol or dextran) for detecting TSH receptor-specific autoantibody and for diagnosing Basedow's disease.

L4 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:796053 CAPLUS
DOCUMENT NUMBER: 132:34772
TITLE: Assays for TSH receptor autoantibodies
INVENTOR(S): Sanders, Jane; Smith, Bernard Rees; Furmaniak, Jadwiga
PATENT ASSIGNEE(S): Rsr Ltd., UK
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|--|
| WO 9964865 | A1 | 19991216 | WO 1999-GB1774 | 19990604 <--
W: JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, |

PT, SE
 EP 1021721 A1 20000726 EP 1999-925202 19990604 <--
 EP 1021721 B1 20060809
 R: AT, CH, DE, ES, FR, GB, IT, LI
 AT 336002 T 20060915 AT 1999-925202 19990604
 ES 2270601 T3 20070401 ES 1999-925202 19990604
 US 6844162 B1 20050118 US 2000-494751 20000131
 PRIORITY APPLN. INFO.: GB 1998-12146 A 19980606
 GB 1999-9661 A 19990428
 WO 1999-GB1774 W 19990604

AB A method of monitoring autoantibodies to TSH (TSH) receptor in a sample of body fluid, comprising the steps of: (a) incubating TSH receptor with a sample of body fluid; (b) reacting the incubated sample of body fluid with at least one binding agent which is capable of binding to the TSH receptor in competitive reaction with TSH receptor autoantibodies (TRAb), or in a case where TSH receptor is complexed to labeled antibody, reacting the sample of body fluid with at least one binding agent which can bind to TRAb in such way as not substantially to interfere with binding of the TRAb to the TSH receptor; and (c) detecting bound TRAb in the reacted incubated sample of body fluid. Thus, mol. cloning of TSH receptor cDNA was performed, recombinant porcine TSHR protein was expressed and used for preparation of monoclonal anti-TSHR antibody (4E31, IgG), immobilized 4E31 and 123I-labeled TSH-TSH receptor complex were prepared for detecting autoantibody in sera of patients with Graves' disease.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1999:451500 CAPLUS
 DOCUMENT NUMBER: 131:83467
 TITLE: Method for production of purified, optionally radioiodinated TSH receptor preparations for use in diagnostics and therapy
 INVENTOR(S): Loos, Ulrich; Minich, Waldemar B.
 PATENT ASSIGNEE(S): B.R.A.H.M.S Diagnostica G.m.b.H., Germany
 SOURCE: Ger. Offen., 8 pp.
 CODEN: GWXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|--------------|
| DE 19801154 | A1 | 19990715 | DE 1998-19801154 | 19980114 <-- |
| WO 9936552 | A1 | 19990722 | WO 1999-EP158 | 19990113 <-- |
| W: JP, US | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, | | | | |
| PT, SE | | | | |
| EP 972055 | A1 | 20000119 | EP 1999-901597 | 19990113 <-- |
| EP 972055 | B1 | 20060510 | | |
| R: AT, BE, CH, DE, FR, IT, LI | | | | |
| JP 2001523115 | T | 20011120 | JP 1999-536734 | 19990113 <-- |
| AT 325879 | T | 20060615 | AT 1999-901597 | 19990113 |
| PRIORITY APPLN. INFO.: | | | DE 1998-19801154 | A 19980114 |
| | | | WO 1999-EP158 | W 19990113 |

AB A recombinant human TSH receptor is produced in which the TSH receptor sequence is fused, via a cleavable intermediate amino acid sequence, with a peptide residue which can bind to a solid phase. After binding to a suitable solid phase, the fusion protein is washed free of contaminants

and optionally radiolabeled, and the peptide linker is then cleaved with a proteinase such as Factor Xa to release the purified TSH receptor protein. The purified receptor may be administered orally to induce tolerance, or may be used in an immunopptn. assay for determination of autoantibodies to TSH receptors in diagnosis of Basedow's disease.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:271714 CAPLUS
DOCUMENT NUMBER: 126:316017
TITLE: Detection of thyroidal autoantibodies
AUTHOR(S): Kato, Ryoji
CORPORATE SOURCE: Junior Coll. Med. Technol., Shinshu Univ., Japan
SOURCE: Medical Technology (Tokyo) (1997), 25(3), 233-238
CODEN: METCDS; ISSN: 0389-1887
PUBLISHER: Ishiyaku
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 13 refs., on methods for detection of thyroidal autoantibodies, thyroidal autoantibodies, anti-microsome antibodies, anti-TSH receptor antibodies, and anti-thyroid hormone antibodies.

L4 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:435782 CAPLUS
DOCUMENT NUMBER: 125:112110
TITLE: Detection of autoantibodies to the thyrotropin receptor
AUTHOR(S): Dallas, John S.; Prabhakar, Bellur S.
CORPORATE SOURCE: Departments Pediatrics, University Texas, Galveston, TX, 77555, USA
SOURCE: Endocrine Methods (1996), 299-318.
Editor(s): Thomas, John A. Academic: San Diego, Calif.
CODEN: 63BWA
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 59 refs. Topics include: the TSH (TSH) receptor and normal thyroid function; the TSH receptor and autoimmune thyroid diseases; and methods to detect autoantibodies to the TSH receptor, including the radioreceptor assay and in vivo and in vitro bioassay methods.

L4 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:518977 CAPLUS
DOCUMENT NUMBER: 122:263513
TITLE: Methods of detecting and combating disorders of the central nervous system
INVENTOR(S): Rogers, Scott W.; McNamara, James O.; Heinemann, Stephen F.
PATENT ASSIGNEE(S): Duke University, USA; Salk Institute for Biological Studies
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXDZ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

| WO | 9505600 | A1 | 19950223 | WO | 1994-US9043 | 19940810 | <-- |
|------------------------|--|----|----------|----|--------------|----------|----------|
| W: | AU, CA, JP | | | | | | |
| RW: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | | | |
| US | 5529898 | A | 19960625 | US | 1993-109234 | 19930819 | <-- |
| CA | 2169273 | A1 | 19950223 | CA | 1994-2169273 | 19940810 | <-- |
| AU | 9475602 | A | 19950314 | AU | 1994-75602 | 19940810 | <-- |
| AU | 680939 | B2 | 19970814 | | | | |
| EP | 714511 | A1 | 19960605 | EP | 1994-925811 | 19940810 | <-- |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | | | |
| JP | 09501770 | T | 19970218 | JP | 1994-507060 | 19940810 | <-- |
| PRIORITY APPLN. INFO.: | | | | US | 1993-109234 | A | 19930819 |
| | | | | WO | 1994-US9043 | W | 19940810 |

AB A method of screening a subject for a central nervous system disorder caused by autoimmune disease (e.g., an inflammatory seizure disorder) comprises collecting a sample from the subject and then detecting the presence or absence of anti-glutamate receptor autoantibodies (e.g., anti-GluR3 glutamate receptor autoantibodies) in the biol. sample. The presence of such autoantibodies indicates the subject is afflicted with a central nervous system disorder caused by autoimmune disease. Methods of treating such disease by reducing the number of autoantibodies available to bind to glutamate receptors in the subject are also disclosed.

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NEWS 6 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication
NEWS 7 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 8 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements
NEWS 9 FEB 08 STN Express, Version 8.3, now available
NEWS 10 FEB 20 PCI now available as a replacement to DPCI
NEWS 11 FEB 25 IFIREF reloaded with enhancements
NEWS 12 FEB 25 IMSPRODUCT reloaded with enhancements
NEWS 13 FEB 29 WPIINDEX/WPIIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS 14 MAR 31 IFICDB, IFIPAT, and IFIUDB enhanced with new custom

NEWS 15 MAR 31 IPC display formats
CAS REGISTRY enhanced with additional experimental spectra
NEWS 16 MAR 31 CA/Caplus and CASREACT patent number format for U.S. applications updated
NEWS 17 MAR 31 LPCI now available as a replacement to LDPCI
NEWS 18 MAR 31 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 19 APR 04 STN AnaVist, Version 1, to be discontinued
NEWS 20 APR 15 WPIDS, WPIINDEX, and WPIX enhanced with new predefined hit display formats
NEWS 21 APR 28 EMBASE Controlled Term thesaurus enhanced
NEWS 22 APR 28 IMSRESEARCH reloaded with enhancements
NEWS 23 MAY 30 INPAFAMDB now available on STN for patent family searching
NEWS 24 MAY 30 DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option

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FULL ESTIMATED COST

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=> S Folate receptor (S) Label (S) assay
L1 0 FOLATE RECEPTOR (S) LABEL (S) ASSAY

=> S Folate receptor (S) label? (L) assay
L2 5 FOLATE RECEPTOR (S) LABEL? (L) ASSAY

=> P_TT_12_1-5

L2 ANSWER 1 OF 5 MEDLINE on STN
TI Preparation and tumor cell uptake of poly(N-isopropylacrylamide) folate conjugates.

L2 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Preparation and tumor cell uptake of poly(N-isopropylacrylamide) folate conjugates.

L2 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
TI Immunoassay for detection of autoantibodies to folate binding protein

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
TI Preparation and Tumor Cell Uptake of Poly(N-isopropylacrylamide) Folate Conjugates

L2 ANSWER 5 OF 5 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
TI Molecular targeting and imaging of non-functional pituitary tumors: Preliminary results.

=> D IBIB abs L2 2-4

L2 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:347024 BIOSIS
DOCUMENT NUMBER: PREV200200347024
TITLE: Preparation and tumor cell uptake of poly(N-isopropylacrylamide) folate conjugates.
AUTHOR(S): Dube, Denis; Francis, Mira; Leroux, Jean-Christophe; Winnik, Francoise M. [Reprint author]
CORPORATE SOURCE: Department of Chemistry and Faculty of Pharmacy, Universite de Montreal, succursale Centre Ville, Montreal, QC, H3C 3J7, Canada
francoise.winnik@umontreal.ca
SOURCE: Bioconjugate Chemistry, (May-June, 2002) Vol. 13, No. 3, pp. 685-692. print.
CODEN: BCCHE5 ISSN: 1043-1802.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jun 2002
Last Updated on STN: 19 Jun 2002

AB Folate conjugates (PNIPAM-NH-FA) of a copolymer of N-isopropylacrylamide (NIPAM) and amino-N-ethylenedioxy-bis(ethylacrylamide) were prepared by an efficient synthesis leading to random grafting, via a short dioxyethylene spacer, of approx7 folic acid residues per macromolecule. The chemical composition of the copolymer was characterized by ¹H NMR and UV/vis spectroscopy. A fluorophore-labeled folate PNIPAM conjugate was tested by *in vitro* assays performed with cultured KB-31 cells overexpressing the folate receptor. The cellular uptake of the copolymer was found to be temperature dependent and was competitively decreased by free folic acid, indicating that the polymer uptake is mediated specifically by the folate receptor. Hydrophobically modified folate conjugates of NIPAM, amino-N'-ethylenedioxy-bis(ethylacrylamide) copolymers, bearing a small number of n-octadecyl groups were prepared following a modified synthetic procedure for use in future studies of FA-targeted liposomes.

L2 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:513611 CAPLUS
DOCUMENT NUMBER: 145:26550
TITLE: Immunoassay for detection of autoantibodies to folate

INVENTOR(S): binding protein
Cabrera, Robert M.; Finnell, Richard
PATENT ASSIGNEE(S): The Texas A & M University System, USA
SOURCE: PCT Int. Appl., 25 pp.

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|------------|
| WO 2006058287 | A2 | 20060601 | WO 2005-US42906 | 20051128 |
| WO 2006058287 | A3 | 20061019 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM | | | |
| CA 2588893 | A1 | 20060601 | CA 2005-2588893 | 20051128 |
| US 20060115860 | A1 | 20060601 | US 2005-288014 | 20051128 |
| EP 1815249 | A2 | 20070808 | EP 2005-852272 | 20051128 |
| R: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | |
| PRIORITY APPLN. INFO.: | | | US 2004-631130P | P 20041126 |
| | | | WO 2005-US42906 | W 20051128 |

AB The present invention is directed to an assay that detects autoantibodies to folate receptor and can be used in the clin. diagnostic testing of these antibodies in humans. The assay described herein has several features that offer advantages over the existing methods. Some of these features include adaptability to high-throughput processing, the use of an Ig antibody to bind autoantibodies bound to folate receptor or the use of enzyme-labeled folic acid to bind folate binding protein and use of fluorescence or chemiluminescence for detection. Using an ELISA-based assay, the disclosed invention demonstrated that folate-binding proteins from human, mouse, and cow could be used as probes fro folate-binding proteins autoantibodies. This assay thereby avoids the use of radioactivity and can be automated and scaled to process hundreds of samples safely and simultaneously. The present invention is also directed to a diagnostic kit to detect autoantibodies to the folate receptor in serum from an individual. Serum samples are obtained from women during mid-gestational pregnancy carrying fetuses suspected of having neural tube defects, and the samples are tested to identify the presence, absence, and relative abundance of folate-binding protein autoantibodies.

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:242859 CAPLUS

DOCUMENT NUMBER: 137:10852

TITLE: Preparation and Tumor Cell Uptake of Poly(N-isopropylacrylamide) Folate Conjugates
AUTHOR(S): Dube, Denis; Francis, Mira; Leroux, Jean-Christophe;
Winnik, Francoise M.
CORPORATE SOURCE: Department of Chemistry and Faculty of Pharmacy,
Universite de Montreal, Montreal, QC, H3C 3J7, Can.

SOURCE:

Bioconjugate Chemistry (2002), 13(3), 685-692

PUBLISHER:

CODEN: ECCHE; ISSN: 1043-1802
American Chemical Society

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB Folate conjugates (PNIPAM-NH-FA) of a copolymer of N-isopropylacrylamide (NIPAM) and amino-N'-ethylenedioxy-bis(ethylacrylamide) were prepared by an efficient synthesis leading to random grafting, via a short dioxyethylene spacer, of .apprx.7 folic acid residues per macromol. The chemical composition of

the copolymer was characterized by 1H NMR and UV/vis spectroscopy. A fluorophore-labeled folate PNIPAM conjugate was tested by in vitro assays performed with cultured KB-31 cells overexpressing the folate receptor. The cellular uptake of the copolymer was found to be temperature dependent and was competitively decreased by free folic acid, indicating that the polymer uptake is mediated specifically by the folate receptor. Hydrophobically modified folate conjugates of NIPAM, amino-N'-ethylenedioxy-bis(ethylacrylamide) copolymers, bearing a small number of n-octadecyl groups were prepared following a modified synthetic procedure for use in future studies of FA-targeted liposomes.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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